

Aleksandr V. Mosenkov

Curriculum Vitae, September 2026

Assistant Professor

Department of Physics and Astronomy
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Background

Academic Positions

- Assistant Professor, Brigham Young University (August 2021 – present)
- Senior Researcher, Central (Pulkovo) Observatory of Russian Academy of Sciences (October 2017 – July 2021)
- Part-time Researcher, Ton Duc Thang University (May 2019 – May 2021)
- Postdoctoral Researcher, Astronomical Observatory, Ghent University (May 2015 – April 2017)
- Junior Researcher, Central (Pulkovo) Observatory of Russian Academy of Sciences (June 2011 – April 2015)
- Part-time Research Fellow, Saint Petersburg State University (May 2008 – December 2017)

Education

- Brigham Young University–Idaho, Idaho, USA, Certificate of the BYUI Pathway Program, May 2014.
- Saint Petersburg State University, Saint Petersburg, Russia, Ph.D. in Physics and Mathematics, December 2013.
- Saint Petersburg State University, Saint Petersburg, Russia, M.S. in Astronomy with honors, June 2008.

Research Statement

My research focuses on the formation and evolution of galaxies, with an emphasis on their structure, dynamics, and faint components that are often missed in standard observations. I use deep photometric and kinematic data to study low-surface-brightness features such as stellar halos, tidal streams, and diffuse light, as well as rare systems like polar-ring galaxies, which provide unique constraints on matter accretion and the shape of dark matter halos. By analyzing galaxy morphology and environments—from isolated systems to compact groups and clusters—I aim to better understand how galaxies interact, evolve, and assemble within dark matter structures.

Research Activities

Scholarship Awards/Recognition

- Struve Award (1st place), Pulkovo Observatory of the Russian Academy of Sciences, 2019.

- Struve Award (1st place), Pulkovo Observatory of the Russian Academy of Sciences, 2017.
- Struve Award (3rd place), Pulkovo Observatory of the Russian Academy of Sciences, 2013.

External Research Grants (Funded)

1. “A study of the properties of galaxy spiral structure using deep photometric data,” RSF project 22-22-00483, 2022 (PI: V. Reshetnikov, co-PI: Aleksandr Mosenkov), total amount funded \$15k.
2. “Structure formation and baryonic cycling in the edge-on galaxy NGC891,” JWST Proposal. Cycle 1, ID. #2180 (PI: I. De Looze, co-I: Aleksandr Mosenkov), total amount funded \$70k.
3. “A study of the distribution and properties of dust in galaxies,” RSF project 20-72-10052, 2020–2021 (PI: Aleksandr Mosenkov), total amount funded \$150k.
4. “Investigation of the spiral structure of disc galaxies based on multi-wavelength (UV–IR) observations,” RFBR project, Saint Petersburg State University, 2018–2020 (PI: S. Savchenko, co-PI: Aleksandr Mosenkov), total amount funded \$10k.
5. “Short-term fellowship in the framework of the project ‘Russian Platform’,” Ghent University, 2018 (PI: Aleksandr Mosenkov), total amount funded \$2k.
6. Postdoctoral grant from the Belgian Federal Science Policy Office, Ghent University, 2015–2017, total amount funded \$45k.
7. “Study of the Vertical Structure of Disc Galaxies,” RFBR project, Saint Petersburg State University, 2014–2016 (PI: Vladimir Reshetnikov).
8. “Study of Characteristics of Different Galaxy Dark Halos,” RFBR project, Saint Petersburg State University, 2011–2013 (PI: Natalia Sotnikova).
9. “Study of Structure and Dynamics of Edge-on Spiral Galaxies,” RFBR project, Saint Petersburg State University, 2009–2011 (PI: Vladimir Reshetnikov).

External Research Grant Applications (Not Funded)

1. “FINESST The Formation and Evolution of Polar-Structure Galaxies Across Cosmic Time,” PI: Aleksandr Mosenkov, FI: Seneca Bahr; proposal submitted Feb 2025 for \$150k.
2. “FINESST From Edge-On Galaxies to the Milky Way: A Definitive Study of Galaxy Dust Disks,” PI: Aleksandr Mosenkov, FI: Jacob Guerrette; proposal submitted Feb 2025 for \$150k.
3. “Tracking the Feedback Mechanisms in the Circumgalactic Medium of NGC 891,” Co-I: Aleksandr Mosenkov (PI: Chastenet, UGent, Belgium); proposal submitted 2023 (JWST Cycle 3) for \$67k.
4. “Unraveling the Nature of Polar Structure Galaxies as Unique Laboratories for Galaxy Formation and Evolution,” PI: Aleksandr Mosenkov; proposal submitted Nov 2024 for \$319k.
5. “Tracking the Feedback Mechanisms in the Circumgalactic Medium of NGC 891,” Co-I: Aleksandr Mosenkov (PI: Chastenet, UGent, Belgium); proposal submitted 2022 (JWST Cycle 2) for \$63k.
6. “SWIFT Observations of Nearby Edge-on Transparency of Spirals (SONETS),” Co-I: Aleksandr Mosenkov (PI: Holwerda, University of Louisville); proposal submitted (SWIFT Cycle 18) for \$45k.
7. “Unraveling the Nature of Galaxies with Polar Structures through Deep Imaging and Cosmological Simulations,” PI: Aleksandr Mosenkov; proposal submitted Nov 2023 for \$321k.
8. “The Hubble Edge-on Disk Galaxies Extragalactic Survey (HEDGES),” Co-I: Aleksandr Mosenkov (PI: Holwerda, University of Louisville); proposal submitted 2022 (HST Enhanced

Schedule Gap Program).

9. “Structural Analysis of Galaxies with Polar Structures in Deep Sky Surveys and Cosmological Simulations,” PI: Aleksandr Mosenkov; proposal submitted Nov 2022 for \$472k.

Publications

Publication metrics: 100 refereed papers, 2,638 citations, h-index = 29 (NASA ADS, August 2026).
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Author indicators: **undergraduate student** whom I mentored (research advisor); **graduate student** whom I mentored (committee chair or committee member).

Peer-Reviewed Journal Articles

- [1] **Kyle R. Adams**, **Aleksandr Mosenkov**, **Jonah Seguire**, **Lydia Stacey**, **Thea Spigarelli**, and **Jonah George**. “Tidal Structures Around Edge-On Galaxies in Deep Imaging Surveys.” *Galaxies* 14(4) (2026). ISSN: 2075-4434. DOI: [10.3390/galaxies14040070](https://doi.org/10.3390/galaxies14040070). URL: <https://www.mdpi.com/2075-4434/14/4/70>.
- [2] Maarten Baes, Paul Vauterin, Abdurro’uf, Nick Andreadis, Thiago Bueno-Dalpia, Sena Bokona Tulu, Peter Camps, Abdissa Tassama Eman, Jacopo Fritz, Andrea Gebek, Anand Utsav Kapoor, Inja Kovačić, Arno Lauwers, Kosei Matsumoto, Kar\’in Menéndez-Delmestre, **Aleksandr V. Mosenkov**, Angelos Nersesian, Lara Pantoni, Mariana Rivas Sánchez, Waad Saftly, Samir Salim, Marko Stalevski, and Qi Zeng. “The TNG50-SKIRT Atlas: Spatially resolved synthetic galaxies from the ultraviolet to the submillimetre (DR2).” *arXiv e-prints* arXiv:2608.01908 (2026). DOI: [10.48550/arXiv.2608.01908](https://doi.org/10.48550/arXiv.2608.01908). arXiv: [2608.01908](https://arxiv.org/abs/2608.01908).
- [3] **Seneca K. H. Bahr**, **Aleksandr V. Mosenkov**, **Jacob A. Guerrette**, **Isaac H. Jensen**, **Jonah X. George**, **Thea E. Spigarelli**, **Ryan P. Smith**, **Brandon T. Burton**, **Kevan W. Beckstead**, **Jonah D. Seguire**, Harrison K. Casper, **Nefi Pineda**, and Michael Holland. “COUGS-DESI: A Catalog of Unusual Galaxies with polar Structures in the DESI Legacy Imaging Surveys.” *A&A* 710 A145 (2026). DOI: [10.1051/0004-6361/202558534](https://doi.org/10.1051/0004-6361/202558534). arXiv: [2601.02579](https://arxiv.org/abs/2601.02579).
- [4] Jérémy Chastenot, Ilse De Looze, Karl D. Gordon, Suzanne C. Madden, Monica Relaño, Karin M. Sandstrom, Dries Van De Putte, Maarten Baes, Simone Bianchi, Alberto D. Bolatto, Viviana Casasola, Daniel A. Dale, Sara Duval, Jacopo Fritz, Frédéric Galliano, Simon C. O. Glover, Stavroula Katsioli, Vasileios Katsis, Florian Kirchschrager, Ralf S. Klessen, Rebecca C. Levy, Sharon E. Meidt, **Aleksandr V. Mosenkov**, Kentaro Nagamine, Lara Pantoni, Helena M. Richie, Stefanie Walch, Thomas G. Williams, and Emanuele M. Xilouris. “Survival of very small carbonaceous dust grains in the inner circumgalactic medium of NGC 891 from JWST/MIRI MRS.” *A&A* 712 A158 (2026). DOI: [10.1051/0004-6361/202558757](https://doi.org/10.1051/0004-6361/202558757). arXiv: [2605.26864](https://arxiv.org/abs/2605.26864).
- [5] George A. Gontcharov, Sergey S. Savchenko, Olga S. Ryutina, Charles Bonatto, Jae-Woo Lee, Vladimir B. Il’in, Maxim Yu. Khovritchev, Alexander A. Marchuk, **Aleksandr V. Mosenkov**, Denis M. Poliakov, and Anton A. Smirnov. “Isochrone fitting of Galactic globular clusters – VII. NGC 1904 (M79), NGC 4372, and revision of NGC 288, NGC 362, NGC 5904 (M5), NGC 6205 (M13), and NGC 6218 (M12).” *PASA* 43 e028 (2026). DOI: [10.1017/pasa.2026.10146](https://doi.org/10.1017/pasa.2026.10146). arXiv: [2601.07555](https://arxiv.org/abs/2601.07555).
- [6] **Jacob A. Guerrette**, **Aleksandr V. Mosenkov**, **Seneca K. H. Bahr**, **Isaac H. Jensen**, **Jonah X. George**, **Thea E. Spigarelli**, **Ryan P. Smith**, **Brandon T. Burton**, **Kevan W. Beckstead**, and **Jonah D. Seguire**. “Revealing Polar-Structure Galaxies Beyond the Local Universe with Euclid.” *Submitted to A&A* (2026).

- [7] Denis M. Poliakov, Anton A. Smirnov, Sergey S. Savchenko, Alexander A. Marchuk, **Aleksandr V. Mosenkov**, Vladimir B. Il'in, George A. Gontcharov, Daria G. Turichina, and Andrey D. Panasyuk. "Analysis of Galactic cirrus filaments in HSC-SSP high-resolution deep images using artificial neural networks." *Astronomy and Computing* 55 p. 101075 (2026). DOI: [10.1016/j.ascom.2026.101075](https://doi.org/10.1016/j.ascom.2026.101075). arXiv: [2602.09779](https://arxiv.org/abs/2602.09779).
- [8] **S. K. H. Bahr**, and **A. V. Mosenkov**. "UGC 10043 in depth: Dissecting the polar bulge and subtle low surface brightness features." *A&A* 698 p. L21 (2025). DOI: [10.1051/0004-6361/202554995](https://doi.org/10.1051/0004-6361/202554995). arXiv: [2505.13653](https://arxiv.org/abs/2505.13653).
- [9] Ilia V. Chugunov, Alexander A. Marchuk, and **Aleksandr V. Mosenkov**. "Less wound and more asymmetric: JWST confirms the evolution of spiral structure in galaxies at $z \lesssim 3$." *PASA* 42 e029 (2025). DOI: [10.1017/pasa.2025.6](https://doi.org/10.1017/pasa.2025.6). arXiv: [2501.11670](https://arxiv.org/abs/2501.11670).
- [10] G. A. Gontcharov, A. A. Marchuk, S. S. Savchenko, **A. V. Mosenkov**, V. B. Il'in, D. M. Poliakov, A. A. Smirnov, and H. Krayani. "Foreground Extinction to Extended Celestial Objects. I. New Extinction Maps." *Research in Astronomy and Astrophysics* 25(12) p. 125016 (2025). DOI: [10.1088/1674-4527/ae12a6](https://doi.org/10.1088/1674-4527/ae12a6). arXiv: [2510.02600](https://arxiv.org/abs/2510.02600).
- [11] Alexander A. Marchuk, Ilia V. Chugunov, Frédéric Galliano, **Aleksandr V. Mosenkov**, Polina V. Strekalova, Sergey S. Savchenko, Valeria S. Kostyuk, George A. Gontcharov, Vladimir B. Il'in, Anton A. Smirnov, and Denis M. Poliakov. "Accurate Decomposition of Galaxies with Spiral Arms: Dust Properties and Distribution." *Galaxies* 13(2) p. 39 (2025). DOI: [10.3390/galaxies13020039](https://doi.org/10.3390/galaxies13020039). arXiv: [2504.05839](https://arxiv.org/abs/2504.05839).
- [12] Vladimir P. Reshetnikov, Ilia V. Chugunov, Alexander A. Marchuk, **Aleksandr V. Mosenkov**, Matvey D. Kozlov, Sergey S. Savchenko, Dmitry I. Makarov, Aleksandra V. Antipova, and Anastasia M. Syrkova. "Galactic warps: From cosmic noon to the current epoch." *A&A* 697 p. L1 (2025). DOI: [10.1051/0004-6361/202554941](https://doi.org/10.1051/0004-6361/202554941). arXiv: [2504.12403](https://arxiv.org/abs/2504.12403).
- [13] Maarten Baes, Andrea Gebek, Ana Trčka, Peter Camps, Arjen van der Wel, Abdurro'uf, Nick Andreadis, Sena Bokona Tulu, Abdissa Tassama Emanu, Jacopo Fritz, **Raymond Kelly**, Inja Kovačić, Antonio La Marca, Marco Martorano, **Aleksandr Mosenkov**, Angelos Nersesian, Vicente Rodriguez-Gomez, Crescenzo Tortora, Bert Vander Meulen, and Lingyu Wang. "The TNG50-SKIRT Atlas: Post-processing methodology and first data release." *A&A* 683 A181 (2024). DOI: [10.1051/0004-6361/202348418](https://doi.org/10.1051/0004-6361/202348418). arXiv: [2401.04224](https://arxiv.org/abs/2401.04224).
- [14] Maarten Baes, **Aleksandr Mosenkov**, **Raymond Kelly**, Abdurro'uf, Nick Andreadis, Sena Bokona Tulu, Peter Camps, Abdissa Tassama Emanu, Jacopo Fritz, Andrea Gebek, Inja Kovačić, Antonio La Marca, Marco Martorano, Angelos Nersesian, Vicente Rodriguez-Gomez, Crescenzo Tortora, Ana Trčka, Bert Vander Meulen, Arjen van der Wel, and Lingyu Wang. "The TNG50-SKIRT Atlas: Wavelength dependence of the effective radius." *A&A* 683 A182 (2024). DOI: [10.1051/0004-6361/202348419](https://doi.org/10.1051/0004-6361/202348419). arXiv: [2401.04225](https://arxiv.org/abs/2401.04225).
- [15] Jérémy Chastenot, Ilse De Looze, Monica Relaño, Daniel A. Dale, Thomas G. Williams, Simone Bianchi, Emmanuel M. Xilouris, Maarten Baes, Alberto D. Bolatto, Martha L. Boyer, Viviana Casasola, Christopher J. R. Clark, Filippo Fraternali, Jacopo Fritz, Frédéric Galliano, Simon C. O. Glover, Karl D. Gordon, Hiroyuki Hirashita, Robert Kennicutt, Kentaro Nagamine, Florian Kirchschlager, Ralf S. Klessen, Eric W. Koch, Rebecca C. Levy, Lewis McCallum, Suzanne C. Madden, Anna F. McLeod, Sharon E. Meidt, **Aleksandr V. Mosenkov**, Helena M. Richie, Amélie Saintonge, Karin M. Sandstrom, Evan E. Schneider, Evgenia E. Sivkova, J. D. T. Smith, Matthew W. L. Smith, Arjen van der Wel, Stefanie Walch, Fabian Walter, and Kenneth Wood. "JWST MIRI and NIRCам observations of NGC 891 and its circumgalactic medium." *A&A* 690 A348 (2024). DOI: [10.1051/0004-6361/202451033](https://doi.org/10.1051/0004-6361/202451033). arXiv: [2408.08026](https://arxiv.org/abs/2408.08026).
- [16] Ilia V. Chugunov, Alexander A. Marchuk, **Aleksandr V. Mosenkov**, Sergey S. Savchenko, Ekaterina V. Shishkina, Maxim I. Chazov, Aleksandra E. Nazarova, Maria N. Skryabina, Polina I. Smirnova, and Anton A. Smirnov. "Galaxies decomposition with spiral arms - I: 29

- galaxies from S⁴G.” MNRAS 527(4) pp. 9605–9624 (2024). DOI: [10.1093/mnras/stad3850](https://doi.org/10.1093/mnras/stad3850). arXiv: [2311.01848](https://arxiv.org/abs/2311.01848).
- [17] G. A. Gontcharov, S. S. Savchenko, A. A. Marchuk, C. J. Bonatto, O. S. Ryutina, M. Yu. Khovritchev, V. B. Il’in, **A. V. Mosenkov**, D. M. Poliakov, and A. A. Smirnov. “Isochrone Fitting of Galactic Globular Clusters—VI. High-latitude Clusters NGC 5024 (M53), NGC 5053, NGC 5272 (M3), NGC 5466, and NGC 7099 (M30).” *Research in Astronomy and Astrophysics* 24(6) p. 065014 (2024). DOI: [10.1088/1674-4527/ad420f](https://doi.org/10.1088/1674-4527/ad420f). arXiv: [2404.14797](https://arxiv.org/abs/2404.14797).
 - [18] **Jacob A. Guerrette**, **Aleksandr V. Mosenkov**, **Dallin Spencer**, and **Zacory D. Shakespear**. “Comparing the Structural Parameters of the Milky Way to Other Spiral Galaxies.” *Research in Astronomy and Astrophysics* 24(3) p. 035002 (2024). DOI: [10.1088/1674-4527/ad1a06](https://doi.org/10.1088/1674-4527/ad1a06). arXiv: [2401.03718](https://arxiv.org/abs/2401.03718).
 - [19] Alexander A. Marchuk, Ilia V. Chugunov, George A. Gontcharov, **Aleksandr V. Mosenkov**, Vladimir B. Il’in, Sergey S. Savchenko, Anton A. Smirnov, Denis M. Poliakov, **Jonah Seguire**, and Maxim I. Chazov. “Galaxies decomposition with spiral arms - II. A multiwavelength case study of M 51.” MNRAS 528(2) pp. 1276–1295 (2024). DOI: [10.1093/mnras/stae108](https://doi.org/10.1093/mnras/stae108). arXiv: [2402.08531](https://arxiv.org/abs/2402.08531).
 - [20] Alexander A. Marchuk, **Aleksandr V. Mosenkov**, Ilia V. Chugunov, Valeria S. Kostiuik, Maria N. Skryabina, and Vladimir P. Reshetnikov. “A new, purely photometric method for determination of resonance locations in spiral galaxies.” MNRAS 527(1) pp. L66–L70 (2024). DOI: [10.1093/mnras/slad141](https://doi.org/10.1093/mnras/slad141). arXiv: [2309.16232](https://arxiv.org/abs/2309.16232).
 - [21] **A. V. Mosenkov**, **S. K. H. Bahr**, V. P. Reshetnikov, **Z. Shakespear**, and D. V. Smirnov. “The occurrence rate of galaxies with polar structures may be significantly underestimated.” A&A 681 p. L15 (2024). DOI: [10.1051/0004-6361/202348494](https://doi.org/10.1051/0004-6361/202348494). arXiv: [2311.03529](https://arxiv.org/abs/2311.03529).
 - [22] **Aleksandr V. Mosenkov**, Andrey D. Panasyuk, **Savanah Turner**, **Crystal-Lynn Bartier**, Maria N. Skryabina, Alexander A. Marchuk, Sergey S. Savchenko, Jakob Bergstedt, Vladimir P. Reshetnikov, and Ilia V. Chugunov. “A multiwavelength study of spiral structure in galaxies. II. Spiral arms in deep optical observations.” MNRAS 527(4) pp. 10615–10631 (2024). DOI: [10.1093/mnras/stad3869](https://doi.org/10.1093/mnras/stad3869). arXiv: [2312.10630](https://arxiv.org/abs/2312.10630).
 - [23] M. N. Skryabina, A. D. Panasyuk, **A. V. Mosenkov**, P. I. Smirnova, A. A. Marchuk, I. V. Chugunov, and V. P. Reshetnikov. “Investigation of the Spiral Structure of Galaxies in Compact Groups and in Isolation.” *Astronomy Letters* 50(7) pp. 440–450 (2024). DOI: [10.1134/S1063773724700312](https://doi.org/10.1134/S1063773724700312).
 - [24] Maria N. Skryabina, **Kyle R. Adams**, and **Aleksandr V. Mosenkov**. “Tidal features and disc thicknesses of edge-on galaxies in the SDSS Stripe 82.” MNRAS 532(1) pp. 883–902 (2024). DOI: [10.1093/mnras/stae1502](https://doi.org/10.1093/mnras/stae1502). arXiv: [2406.13496](https://arxiv.org/abs/2406.13496).
 - [25] Daniil V. Smirnov, **Aleksandr V. Mosenkov**, and Vladimir P. Reshetnikov. “Polar-ring galaxies in the Illustris TNG50 simulation.” MNRAS 527(2) pp. 4112–4128 (2024). DOI: [10.1093/mnras/stad3368](https://doi.org/10.1093/mnras/stad3368). arXiv: [2310.18597](https://arxiv.org/abs/2310.18597).
 - [26] K. Aditya, Arunima Banerjee, Peter Kamphuis, **Aleksandr Mosenkov**, Dmitry Makarov, and Sviatoslav Borisov. “H I 21cm observations and dynamical modelling of the thinnest galaxy: FGC 2366.” MNRAS 526(1) pp. 29–42 (2023). DOI: [10.1093/mnras/stad2599](https://doi.org/10.1093/mnras/stad2599). arXiv: [2308.13312](https://arxiv.org/abs/2308.13312).
 - [27] G. A. Gontcharov, A. A. Marchuk, M. Yu. Khovritchev, **A. V. Mosenkov**, S. S. Savchenko, V. B. Il’in, D. M. Poliakov, and A. A. Smirnov. “New Interstellar Extinction Maps Based on Gaia and Other Sky Surveys.” *Astronomy Letters* 49(11) pp. 673–696 (2023). DOI: [10.1134/S1063773723110026](https://doi.org/10.1134/S1063773723110026). arXiv: [2402.06474](https://arxiv.org/abs/2402.06474).
 - [28] George A. Gontcharov, Charles J. Bonatto, Olga S. Ryutina, Sergey S. Savchenko, **Aleksandr V. Mosenkov**, Vladimir B. Il’in, Maxim Yu Khovritchev, Alexander A. Marchuk, Denis M. Poliakov, Anton A. Smirnov, and **Jonah Seguire**. “Isochrone fitting of Galactic

- globular clusters - V. NGC 6397 and NGC 6809 (M55).” MNRAS 526(4) pp. 5628–5647 (2023). DOI: [10.1093/mnras/stad3134](https://doi.org/10.1093/mnras/stad3134). arXiv: [2402.06524](https://arxiv.org/abs/2402.06524).
- [29] George A. Gontcharov, Maxim Yu Khovritchev, **Aleksandr V. Mosenkov**, Vladimir B. Il’in, Alexander A. Marchuk, Denis M. Poliakov, Olga S. Ryutina, Sergey S. Savchenko, Anton A. Smirnov, Pavel A. Usachev, Jae-Woo Lee, Conner Camacho, and **Noah Hebdon**. “Isochrone fitting of Galactic globular clusters - IV. NGC 6362 and NGC 6723.” MNRAS 518(2) pp. 3036–3054 (2023). DOI: [10.1093/mnras/stac3300](https://doi.org/10.1093/mnras/stac3300). arXiv: [2211.12684](https://arxiv.org/abs/2211.12684).
- [30] V. B. Il’in, D. G. Turichina, V. G. Farafonov, S. I. Laznevoi, G. A. Gontcharov, A. A. Marchuk, **A. V. Mosenkov**, D. M. Poliakov, S. S. Savchenko, A. A. Smirnov, and M. S. Prokopjeva. “A new practical approach to light scattering by spheroids with the use of spheroidal and spherical function bases.” J. Quant. Spec. Radiat. Transf. 311 p. 108759 (2023). DOI: [10.1016/j.jqsrt.2023.108759](https://doi.org/10.1016/j.jqsrt.2023.108759).
- [31] **Aleksandr V. Mosenkov**, R. Michael Rich, Michael Fusco, Julia Kennefick, David Thilker, Alexander Marchuk, Noah Brosch, Michael West, Michael Gregg, Francis Longstaff, Andreas J. Koch-Hansen, Shameer Abdeen, and **William Roque**. “The haloes and environments of nearby galaxies (HERON) - III. A 45-kpc spiral structure in the GLSB galaxy UGC 4599.” MNRAS 525(2) pp. 3016–3031 (2023). DOI: [10.1093/mnras/stad2515](https://doi.org/10.1093/mnras/stad2515). arXiv: [2308.09093](https://arxiv.org/abs/2308.09093).
- [32] V. P. Reshetnikov, A. A. Marchuk, I. V. Chugunov, P. A. Usachev, and **A. V. Mosenkov**. “The possible evolution of pitch angles of spiral galaxies.” A&A 680 p. L14 (2023). DOI: [10.1051/0004-6361/202348449](https://doi.org/10.1051/0004-6361/202348449). arXiv: [2311.16915](https://arxiv.org/abs/2311.16915).
- [33] Sergey S. Savchenko, Denis M. Poliakov, **Aleksandr V. Mosenkov**, Anton A. Smirnov, Alexander A. Marchuk, Vladimir B. Il’in, George A. Gontcharov, **Jonah Seguire**, and Maarten Baes. “The problem of dust attenuation in photometric decomposition of edge-on galaxies and possible solutions.” MNRAS 524(3) pp. 4729–4745 (2023). DOI: [10.1093/mnras/stad2189](https://doi.org/10.1093/mnras/stad2189). arXiv: [2309.06257](https://arxiv.org/abs/2309.06257).
- [34] Anton A. Smirnov, Sergey S. Savchenko, Denis M. Poliakov, Alexander A. Marchuk, **Aleksandr V. Mosenkov**, Vladimir B. Il’in, George A. Gontcharov, Javier Román, and **Jonah Seguire**. “Prospects for future studies using deep imaging: analysis of individual Galactic cirrus filaments.” MNRAS 519(3) pp. 4735–4752 (2023). DOI: [10.1093/mnras/stac3765](https://doi.org/10.1093/mnras/stac3765). arXiv: [2301.12410](https://arxiv.org/abs/2301.12410).
- [35] K. Aditya, Peter Kamphuis, Arunima Banerjee, Sviatoslav Borisov, **Aleksandr Mosenkov**, Aleksandra Antipova, and Dmitry Makarov. “H I 21 cm observation and mass models of the extremely thin galaxy FGC 1440.” MNRAS 509(3) pp. 4071–4093 (2022). DOI: [10.1093/mnras/stab3143](https://doi.org/10.1093/mnras/stab3143). arXiv: [2110.15478](https://arxiv.org/abs/2110.15478).
- [36] Simone Bianchi, Viviana Casasola, Edvige Corbelli, Frédéric Galliano, Laura Magrini, Angelos Nersesian, Francesco Salvestrini, Maarten Baes, Letizia P. Cassarà, Christopher J. R. Clark, Ilse De Looze, Anthony P. Jones, Suzanne C. Madden, **Aleksandr Mosenkov**, and Nathalie Ysard. “Dust emissivity in resolved spiral galaxies.” A&A 664 A187 (2022). DOI: [10.1051/0004-6361/202243930](https://doi.org/10.1051/0004-6361/202243930). arXiv: [2206.13375](https://arxiv.org/abs/2206.13375).
- [37] Viviana Casasola, Simone Bianchi, Laura Magrini, **Aleksandr V. Mosenkov**, Francesco Salvestrini, Maarten Baes, Francesco Calura, Letizia P. Cassarà, Christopher J. R. Clark, Edvige Corbelli, Jacopo Fritz, Frédéric Galliano, Elisabetta Liuzzo, Suzanne Madden, Angelos Nersesian, Francesca Pozzi, Sambit Roychowdhury, Ivano Baronchelli, Matteo Bonato, Carlotta Gruppioni, and Lara Pantoni. “The resolved scaling relations in DustPedia: Zooming in on the local Universe.” A&A 668 A130 (2022). DOI: [10.1051/0004-6361/202245043](https://doi.org/10.1051/0004-6361/202245043). arXiv: [2210.15993](https://arxiv.org/abs/2210.15993).
- [38] G. A. Gontcharov, **A. V. Mosenkov**, S. S. Savchenko, V. B. Il’in, A. A. Marchuk, A. A. Smirnov, P. A. Usachev, D. M. Polyakov, and **N. Hebdon**. “A Three-Dimensional Analytical Model of the Interstellar Extinction within the Nearest Kiloparsec.” *Astronomy Letters* 48(10) pp. 578–600 (2022). DOI: [10.1134/S1063773722100024](https://doi.org/10.1134/S1063773722100024).

- [39] G. A. Gontcharov, **A. V. Mosenkov**, S. S. Savchenko, V. B. Il'in, A. A. Marchuk, A. A. Smirnov, P. A. Usachev, D. M. Polyakov, and **Z. Shakespear**. “Interstellar Extinction in Galactic Cirri in SDSS Stripe 82.” *Astronomy Letters* 48(9) pp. 503–516 (2022). DOI: [10.1134/S1063773722090031](https://doi.org/10.1134/S1063773722090031). arXiv: [2301.10591](https://arxiv.org/abs/2301.10591).
- [40] D. Makarov, S. Savchenko, **A. Mosenkov**, D. Bizyaev, V. Reshetnikov, A. Antipova, I. Tikhonenko, P. Usachev, S. Borisov, L. Makarova, S. Kautsch, A. Marchuk, and E. Rubtsov. “The edge-on Galaxies in the Pan-STARRS survey (EGIPS).” *MNRAS* 511(2) pp. 3063–3075 (2022). DOI: [10.1093/mnras/stac227](https://doi.org/10.1093/mnras/stac227). arXiv: [2201.08888](https://arxiv.org/abs/2201.08888).
- [41] A. A. Marchuk, V. P. Reshetnikov, **A. V. Mosenkov**, I. V. Chugunov, and P. A. Usachev. “Width variation in the spiral arms of distant galaxies from HST COSMOS field.” *Publications of the Pulkovo Observatory* 227 pp. 100–112 (2022). DOI: [10.31725/0367-7966-2022-227-7](https://doi.org/10.31725/0367-7966-2022-227-7).
- [42] **A. V. Mosenkov**. “Deep photometry of spiral galaxies.” *Publications of the Pulkovo Observatory* 227 pp. 133–145 (2022). DOI: [10.31725/0367-7966-2022-227-10](https://doi.org/10.31725/0367-7966-2022-227-10).
- [43] **Aleksandr V. Mosenkov**, Vladimir P. Reshetnikov, Maria N. Skryabina, and **Zacory Shakespear**. “Unveiling the Nature of Polar-ring Galaxies from Deep Imaging.” *Research in Astronomy and Astrophysics* 22(11) p. 115003 (2022). DOI: [10.1088/1674-4527/ac8d82](https://doi.org/10.1088/1674-4527/ac8d82). arXiv: [2208.12943](https://arxiv.org/abs/2208.12943).
- [44] **Aleksandr V. Mosenkov**, Pavel A. Usachev, **Zacory Shakespear**, **Jacob Guerrette**, Maarten Baes, Simone Bianchi, Emmanuel M. Xilouris, George A. Gontcharov, Vladimir B. Il'in, Alexander A. Marchuk, Sergey S. Savchenko, and Anton A. Smirnov. “The distribution of dust in edge-on galaxies: I. The global structure.” *MNRAS* 515(4) pp. 5698–5717 (2022). DOI: [10.1093/mnras/stac2112](https://doi.org/10.1093/mnras/stac2112). arXiv: [2207.11589](https://arxiv.org/abs/2207.11589).
- [45] V. P. Reshetnikov, A. A. Marchuk, I. V. Chugunov, P. A. Usachev, and **A. V. Mosenkov**. “Evolution of the Spiral Structure of Galaxies from HST COSMOS Field Data.” *Astronomy Letters* 48(11) pp. 644–652 (2022). DOI: [10.1134/S1063773722110111](https://doi.org/10.1134/S1063773722110111). arXiv: [2302.02366](https://arxiv.org/abs/2302.02366).
- [46] A. V. Antipova, **A. V. Mosenkov**, D. I. Makarov, and V. P. Reshetnikov. “Decomposition of Images of Ultra-Flat Galaxies.” *Astrophysical Bulletin* 76(4) pp. 358–366 (2021). DOI: [10.1134/S1990341321040027](https://doi.org/10.1134/S1990341321040027).
- [47] Dmitry Bizyaev, D. I. Makarov, V. P. Reshetnikov, **A. V. Mosenkov**, S. J. Kautsch, and A. V. Antipova. “Spectral Observations of Superthin Galaxies.” *ApJ* 914(2) p. 104 (2021). DOI: [10.3847/1538-4357/abfb03](https://doi.org/10.3847/1538-4357/abfb03). arXiv: [2105.11855](https://arxiv.org/abs/2105.11855).
- [48] Frédéric Galliano, Angelos Nersesian, Simone Bianchi, Ilse De Looze, Sambit Roychowdhury, Maarten Baes, Viviana Casasola, Letizia P. Cassará, Wouter Dobbels, Jacopo Fritz, Maud Galametz, Anthony P. Jones, Suzanne C. Madden, **Aleksandr Mosenkov**, Emmanuel M. Xilouris, and Nathalie Ysard. “A nearby galaxy perspective on dust evolution. Scaling relations and constraints on the dust build-up in galaxies with the DustPedia and DGS samples.” *A&A* 649 A18 (2021). DOI: [10.1051/0004-6361/202039701](https://doi.org/10.1051/0004-6361/202039701). arXiv: [2101.00456](https://arxiv.org/abs/2101.00456).
- [49] George A. Gontcharov, Maxim Yu Khovritchev, **Aleksandr V. Mosenkov**, Vladimir B. Il'in, Alexander A. Marchuk, Sergey S. Savchenko, Anton A. Smirnov, Pavel A. Usachev, and Denis M. Poliakov. “Isochrone fitting of Galactic globular clusters - III. NGC 288, NGC 362, and NGC 6218 (M12).” *MNRAS* 508(2) pp. 2688–2705 (2021). DOI: [10.1093/mnras/stab2756](https://doi.org/10.1093/mnras/stab2756). arXiv: [2109.13115](https://arxiv.org/abs/2109.13115).
- [50] George A. Gontcharov, and **Aleksandr V. Mosenkov**. “Gaia DR2 giants in the Galactic dust - I. Reddening across the whole dust layer and some properties of the giant clump.” *MNRAS* 500(2) pp. 2590–2606 (2021). DOI: [10.1093/mnras/staa2761](https://doi.org/10.1093/mnras/staa2761). arXiv: [2011.11113](https://arxiv.org/abs/2011.11113).
- [51] George A. Gontcharov, and **Aleksandr V. Mosenkov**. “Gaia DR2 giants in the Galactic dust - II. Application of the reddening maps and models.” *MNRAS* 500(2) pp. 2607–2619 (2021). DOI: [10.1093/mnras/staa2728](https://doi.org/10.1093/mnras/staa2728). arXiv: [2011.13811](https://arxiv.org/abs/2011.13811).

- [52] Alexander A. Marchuk, Anton A. Smirnov, **Aleksandr V. Mosenkov**, Vladimir B. Il'in, George A. Gontcharov, Sergey S. Savchenko, and Javier Román. “Fractal dimension of optical cirrus in Stripe82.” MNRAS 508(4) pp. 5825–5841 (2021). DOI: [10.1093/mnras/stab2846](https://doi.org/10.1093/mnras/stab2846). arXiv: [2109.14034](https://arxiv.org/abs/2109.14034).
- [53] **Aleksandr V. Mosenkov**, Sergey S. Savchenko, Anton A. Smirnov, and Peter Camps. “The structure of the Milky Way based on unWISE 3.4 μm integrated photometry.” MNRAS 507(4) pp. 5246–5263 (2021). DOI: [10.1093/mnras/stab2445](https://doi.org/10.1093/mnras/stab2445). arXiv: [2108.10413](https://arxiv.org/abs/2108.10413).
- [54] Angelos Nersesian, Wouter Dobbels, Emmanuel M. Xilouris, Maarten Baes, Simone Bianchi, Viviana Casasola, Christopher J. R. Clark, Ilse De Looze, Frédéric Galliano, Suzanne C. Madden, **Aleksandr V. Mosenkov**, Evangelos-D. Paspaliaris, and Ana Trčka. “Probing the spectral shape of dust emission with the DustPedia galaxy sample.” MNRAS 506(3) pp. 3986–3995 (2021). DOI: [10.1093/mnras/stab1984](https://doi.org/10.1093/mnras/stab1984). arXiv: [2107.04383](https://arxiv.org/abs/2107.04383).
- [55] Denis Poliakov, **Aleksandr V. Mosenkov**, Noah Brosch, Shuki Koriski, and R. Michael Rich. “Quantified diffuse light in compact groups of galaxies.” MNRAS 503(4) pp. 6059–6077 (2021). DOI: [10.1093/mnras/stab853](https://doi.org/10.1093/mnras/stab853). arXiv: [2103.11924](https://arxiv.org/abs/2103.11924).
- [56] Maarten Baes, Angelos Nersesian, Viviana Casasola, Simone Bianchi, Letizia P. Cassarà, Christopher J. R. Clark, Ilse De Looze, Wouter Dobbels, Jacopo Fritz, Maud Galametz, Frédéric Galliano, Suzanne C. Madden, **Aleksandr V. Mosenkov**, Sébastien Viaene, Ana Trčka, and Emmanuel M. Xilouris. “Nonparametric galaxy morphology from UV to submm wavelengths.” A&A 641 A119 (2020). DOI: [10.1051/0004-6361/202038470](https://doi.org/10.1051/0004-6361/202038470). arXiv: [2007.02012](https://arxiv.org/abs/2007.02012).
- [57] V. Casasola, S. Bianchi, P. De Vis, L. Magrini, E. Corbelli, C. J. R. Clark, J. Fritz, A. Nersesian, S. Viaene, M. Baes, L. P. Cassarà, J. Davies, I. De Looze, W. Dobbels, M. Galametz, F. Galliano, A. P. Jones, S. C. Madden, **A. V. Mosenkov**, A. Trčka, and E. Xilouris. “The ISM scaling relations in DustPedia late-type galaxies: A benchmark study for the Local Universe.” A&A 633 A100 (2020). DOI: [10.1051/0004-6361/201936665](https://doi.org/10.1051/0004-6361/201936665). arXiv: [1911.09187](https://arxiv.org/abs/1911.09187).
- [58] W. Dobbels, M. Baes, S. Viaene, S. Bianchi, J. I. Davies, V. Casasola, C. J. R. Clark, J. Fritz, M. Galametz, F. Galliano, **A. Mosenkov**, A. Nersesian, and A. Trčka. “Predicting the global far-infrared SED of galaxies via machine learning techniques.” A&A 634 A57 (2020). DOI: [10.1051/0004-6361/201936695](https://doi.org/10.1051/0004-6361/201936695). arXiv: [1910.06330](https://arxiv.org/abs/1910.06330).
- [59] George A. Gontcharov, Maxim Yu Khovritchev, and **Aleksandr V. Mosenkov**. “Isochrone fitting of Galactic globular clusters – II. NGC 6205 (M13).” MNRAS 497(3) pp. 3674–3693 (2020). DOI: [10.1093/mnras/staa1694](https://doi.org/10.1093/mnras/staa1694). arXiv: [2008.10200](https://arxiv.org/abs/2008.10200).
- [60] **Aleksandr Mosenkov**, R. Michael Rich, Andreas Koch, Noah Brosch, David Thilker, Javier Román, Oliver Müller, Anton Smirnov, and Pavel Usachev. “The haloes and environments of nearby galaxies (HERON) - II. The outer structure of edge-on galaxies.” MNRAS 494(2) pp. 1751–1770 (2020). DOI: [10.1093/mnras/staa678](https://doi.org/10.1093/mnras/staa678). arXiv: [2003.03392](https://arxiv.org/abs/2003.03392).
- [61] **Aleksandr Mosenkov**, Sergey Savchenko, and Alexander Marchuk. “Investigation of the parameters of spiral pattern in galaxies: the arm width.” *Research in Astronomy and Astrophysics* 20(8) p. 120 (2020). DOI: [10.1088/1674-4527/20/8/120](https://doi.org/10.1088/1674-4527/20/8/120). arXiv: [2003.13994](https://arxiv.org/abs/2003.13994).
- [62] **Aleksandr V. Mosenkov**, Anton A. Smirnov, Olga K. Sil'chenko, R. Michael Rich, Vladimir P. Reshetnikov, and John Kormendy. “Tilted outer and inner structures in edge-on galaxies?.” MNRAS 497(2) pp. 2039–2056 (2020). DOI: [10.1093/mnras/staa1885](https://doi.org/10.1093/mnras/staa1885). arXiv: [2006.14896](https://arxiv.org/abs/2006.14896).
- [63] Angelos Nersesian, Sam Verstocken, Sébastien Viaene, Maarten Baes, Emmanuel M. Xilouris, Simone Bianchi, Viviana Casasola, Christopher J. R. Clark, Jonathan I. Davies, Ilse De Looze, Pieter De Vis, Wouter Dobbels, Jacopo Fritz, Maud Galametz, Frédéric Galliano, Anthony P. Jones, Suzanne C. Madden, **Aleksandr V. Mosenkov**, Ana Trčka, and Nathalie Ysard. “High-resolution, 3D radiative transfer modelling. III. The DustPedia barred galaxies.” A&A 637 A25 (2020). DOI: [10.1051/0004-6361/201936176](https://doi.org/10.1051/0004-6361/201936176). arXiv: [2004.03616](https://arxiv.org/abs/2004.03616).

- [64] Angelos Nersesian, Sébastien Viaene, Ilse De Looze, Maarten Baes, Emmanuel M. Xilouris, Matthew W. L. Smith, Simone Bianchi, Viviana Casasola, Letizia P. Cassarà, Christopher J. R. Clark, Wouter Dobbels, Jacopo Fritz, Frédéric Galliano, Suzanne C. Madden, **Aleksandr V. Mosenkov**, and Ana Trčka. “High-resolution, 3D radiative transfer modelling. V. A detailed model of the M 51 interacting pair.” *A&A* 643 A90 (2020). DOI: [10.1051/0004-6361/202038939](https://doi.org/10.1051/0004-6361/202038939). arXiv: [2009.07280](https://arxiv.org/abs/2009.07280).
- [65] Sergey Savchenko, Alexander Marchuk, **Aleksandr Mosenkov**, and Konstantin Grishunin. “A multiwavelength study of spiral structure in galaxies. I. General characteristics in the optical.” *MNRAS* 493(1) pp. 390–409 (2020). DOI: [10.1093/mnras/staa258](https://doi.org/10.1093/mnras/staa258). arXiv: [2001.09110](https://arxiv.org/abs/2001.09110).
- [66] Ana Trčka, Maarten Baes, Peter Camps, Sharon E. Meidt, James Trayford, Simone Bianchi, Viviana Casasola, Letizia P. Cassarà, Ilse De Looze, Pieter De Vis, Wouter Dobbels, Jacopo Fritz, Maud Galametz, Frédéric Galliano, Antonios Katsianis, Suzanne C. Madden, **Aleksandr V. Mosenkov**, Angelos Nersesian, Sébastien Viaene, and Emmanuel M. Xilouris. “Reproducing the Universe: a comparison between the EAGLE simulations and the nearby DustPedia galaxy sample.” *MNRAS* 494(2) pp. 2823–2838 (2020). DOI: [10.1093/mnras/staa857](https://doi.org/10.1093/mnras/staa857). arXiv: [2003.12576](https://arxiv.org/abs/2003.12576).
- [67] Sam Verstocken, Angelos Nersesian, Maarten Baes, Sébastien Viaene, Simone Bianchi, Viviana Casasola, Christopher J. R. Clark, Jonathan I. Davies, Ilse De Looze, Pieter De Vis, Wouter Dobbels, Frédéric Galliano, Anthony P. Jones, Suzanne C. Madden, **Aleksandr V. Mosenkov**, Ana Trčka, and Emmanuel M. Xilouris. “High-resolution, 3D radiative transfer modelling. II. The early-type spiral galaxy M 81.” *A&A* 637 A24 (2020). DOI: [10.1051/0004-6361/201935770](https://doi.org/10.1051/0004-6361/201935770). arXiv: [2004.03615](https://arxiv.org/abs/2004.03615).
- [68] S. Viaene, A. Nersesian, J. Fritz, S. Verstocken, M. Baes, S. Bianchi, V. Casasola, L. Cassarà, C. Clark, J. Davies, I. De Looze, P. De Vis, W. Dobbels, M. Galametz, F. Galliano, A. Jones, S. Madden, **A. Mosenkov**, A. Trčka, E. M. Xilouris, and N. Ysard. “High-resolution, 3D radiative transfer modelling. IV. AGN-powered dust heating in NGC 1068.” *A&A* 638 A150 (2020). DOI: [10.1051/0004-6361/202037476](https://doi.org/10.1051/0004-6361/202037476). arXiv: [2005.01720](https://arxiv.org/abs/2005.01720).
- [69] S. Bianchi, V. Casasola, M. Baes, C. J. R. Clark, E. Corbelli, J. I. Davies, I. De Looze, P. De Vis, W. Dobbels, M. Galametz, F. Galliano, A. P. Jones, S. C. Madden, L. Magrini, **A. Mosenkov**, A. Nersesian, S. Viaene, E. M. Xilouris, and N. Ysard. “Dust emissivity and absorption cross section in DustPedia late-type galaxies.” *A&A* 631 A102 (2019). DOI: [10.1051/0004-6361/201936314](https://doi.org/10.1051/0004-6361/201936314). arXiv: [1909.12692](https://arxiv.org/abs/1909.12692).
- [70] Noah Brosch, Shuki Koriski, R. Michael Rich, and **Alexandr V. Mosenkov**. “Hickson Compact Group 98: a complex merging group with a giant tidal tail and a humongous envelope.” *MNRAS* 482(2) pp. 2284–2293 (2019). DOI: [10.1093/mnras/sty2717](https://doi.org/10.1093/mnras/sty2717).
- [71] C. J. R. Clark, P. De Vis, M. Baes, S. Bianchi, V. Casasola, L. P. Cassarà, J. I. Davies, W. Dobbels, S. Lianou, I. De Looze, R. Evans, M. Galametz, F. Galliano, A. P. Jones, S. C. Madden, **A. V. Mosenkov**, S. Verstocken, S. Viaene, E. M. Xilouris, and N. Ysard. “The first maps of κ_d - the dust mass absorption coefficient - in nearby galaxies, with DustPedia.” *MNRAS* 489(4) pp. 5256–5283 (2019). DOI: [10.1093/mnras/stz2257](https://doi.org/10.1093/mnras/stz2257). arXiv: [1908.04318](https://arxiv.org/abs/1908.04318).
- [72] J. I. Davies, A. Nersesian, M. Baes, S. Bianchi, V. Casasola, L. P. Cassarà, C. J. R. Clark, I. De Looze, P. De Vis, R. Evans, J. Fritz, M. Galametz, F. Galliano, A. P. Jones, S. Lianou, S. C. Madden, **A. V. Mosenkov**, M. W. L. Smith, S. Verstocken, S. Viaene, M. Vika, E. Xilouris, and N. Ysard. “DustPedia: the relationships between stars, gas, and dust for galaxies residing in different environments.” *A&A* 626 A63 (2019). DOI: [10.1051/0004-6361/201935547](https://doi.org/10.1051/0004-6361/201935547). arXiv: [1904.13217](https://arxiv.org/abs/1904.13217).
- [73] P. De Vis, A. Jones, S. Viaene, V. Casasola, C. J. R. Clark, M. Baes, S. Bianchi, L. P. Cassara, J. I. Davies, I. De Looze, M. Galametz, F. Galliano, S. Lianou, S. Madden, A. Manilla-Robles, **A. V. Mosenkov**, A. Nersesian, S. Roychowdhury, E. M. Xilouris, and N.

- Ysard. “A systematic metallicity study of DustPedia galaxies reveals evolution in the dust-to-metal ratios.” *A&A* 623 A5 (2019). DOI: [10.1051/0004-6361/201834444](https://doi.org/10.1051/0004-6361/201834444). arXiv: [1901.09040](https://arxiv.org/abs/1901.09040).
- [74] George A. Gontcharov, and **Aleksandr V. Mosenkov**. “Interstellar polarization and extinction in the Local Bubble and the Gould Belt.” *MNRAS* 483(1) pp. 299–314 (2019). DOI: [10.1093/mnras/sty2978](https://doi.org/10.1093/mnras/sty2978). arXiv: [1811.01411](https://arxiv.org/abs/1811.01411).
 - [75] George A. Gontcharov, **Aleksandr V. Mosenkov**, and Maxim Yu Khovritchev. “Isochrone fitting of Galactic globular clusters - I. NGC 5904.” *MNRAS* 483(4) pp. 4949–4967 (2019). DOI: [10.1093/mnras/sty3439](https://doi.org/10.1093/mnras/sty3439). arXiv: [1812.06433](https://arxiv.org/abs/1812.06433).
 - [76] S. Lianou, P. Barmby, **A. A. Mosenkov**, M. Lehnert, and O. Karczewski. “Dust properties and star formation of approximately a thousand local galaxies.” *A&A* 631 A38 (2019). DOI: [10.1051/0004-6361/201834553](https://doi.org/10.1051/0004-6361/201834553). arXiv: [1906.02712](https://arxiv.org/abs/1906.02712).
 - [77] **A. V. Mosenkov**, M. Baes, S. Bianchi, V. Casasola, L. P. Cassarà, C. J. R. Clark, J. Davies, I. De Looze, P. De Vis, J. Fritz, M. Galametz, F. Galliano, A. P. Jones, S. Lianou, S. C. Madden, A. Nersesian, M. W. L. Smith, A. Trčka, S. Verstocken, S. Viaene, M. Vika, and E. Xilouris. “Dust emission profiles of DustPedia galaxies.” *A&A* 622 A132 (2019). DOI: [10.1051/0004-6361/201833932](https://doi.org/10.1051/0004-6361/201833932). arXiv: [1811.08923](https://arxiv.org/abs/1811.08923).
 - [78] A. Nersesian, E. M. Xilouris, S. Bianchi, F. Galliano, A. P. Jones, M. Baes, V. Casasola, L. P. Cassarà, C. J. R. Clark, J. I. Davies, M. Decleir, W. Dobbels, I. De Looze, P. De Vis, J. Fritz, M. Galametz, S. C. Madden, **A. V. Mosenkov**, A. Trčka, S. Verstocken, S. Viaene, and S. Lianou. “Old and young stellar populations in DustPedia galaxies and their role in dust heating.” *A&A* 624 A80 (2019). DOI: [10.1051/0004-6361/201935118](https://doi.org/10.1051/0004-6361/201935118). arXiv: [1903.05933](https://arxiv.org/abs/1903.05933).
 - [79] Vladimir P. Reshetnikov, and **Aleksandr V. Mosenkov**. “New candidates to polar-ring galaxies from the Sloan Digital Sky Survey.” *MNRAS* 483(2) pp. 1470–1480 (2019). DOI: [10.1093/mnras/sty3209](https://doi.org/10.1093/mnras/sty3209). arXiv: [1811.10222](https://arxiv.org/abs/1811.10222).
 - [80] R. Michael Rich, **Aleksandr Mosenkov**, Henry Lee-Saunders, Andreas Koch, John Kormendy, Julia Kennefick, Noah Brosch, Laura Sales, James Bullock, Andreas Burkert, Michelle Collins, Michael Cooper, Michael Fusco, David Reitzel, David Thilker, Dave G. Milewski, Lydia Elias, M. L. Saade, and Laura De Groot. “The haloes and environments of nearby galaxies (HERON) - I. Imaging, sample characteristics, and envelope diameters.” *MNRAS* 490(2) pp. 1539–1569 (2019). DOI: [10.1093/mnras/stz2106](https://doi.org/10.1093/mnras/stz2106). arXiv: [1907.10706](https://arxiv.org/abs/1907.10706).
 - [81] S. Bianchi, P. De Vis, S. Viaene, A. Nersesian, **A. V. Mosenkov**, E. M. Xilouris, M. Baes, V. Casasola, L. P. Cassarà, C. J. R. Clark, J. I. Davies, I. De Looze, W. Dobbels, M. Galametz, F. Galliano, A. P. Jones, S. Lianou, S. C. Madden, and A. Trčka. “Fraction of bolometric luminosity absorbed by dust in DustPedia galaxies.” *A&A* 620 A112 (2018). DOI: [10.1051/0004-6361/201833699](https://doi.org/10.1051/0004-6361/201833699). arXiv: [1810.01208](https://arxiv.org/abs/1810.01208).
 - [82] C. J. R. Clark, S. Verstocken, S. Bianchi, J. Fritz, S. Viaene, M. W. L. Smith, M. Baes, V. Casasola, L. P. Cassara, J. I. Davies, I. De Looze, P. De Vis, R. Evans, M. Galametz, A. P. Jones, S. Lianou, S. Madden, **A. V. Mosenkov**, and M. Xilouris. “DustPedia: Multiwavelength photometry and imagery of 875 nearby galaxies in 42 ultraviolet-microwave bands.” *A&A* 609 A37 (2018). DOI: [10.1051/0004-6361/201731419](https://doi.org/10.1051/0004-6361/201731419). arXiv: [1708.05335](https://arxiv.org/abs/1708.05335).
 - [83] George A. Gontcharov, and **Aleksandr V. Mosenkov**. “Verifying reddening and extinction for Gaia DR1 TGAS giants.” *MNRAS* 475(1) pp. 1121–1130 (2018). DOI: [10.1093/mnras/stx3251](https://doi.org/10.1093/mnras/stx3251). arXiv: [1801.07392](https://arxiv.org/abs/1801.07392).
 - [84] **Aleksandr V. Mosenkov**, Flor Allaert, Maarten Baes, Simone Bianchi, Peter Camps, Christopher J. R. Clark, Marjorie Decleir, Gert De Geyter, Ilse De Looze, Jacopo Fritz, Gianfranco Gentile, Benne W. Holwerda, Thomas M. Hughes, Fraser Lewis, Matthew W. L. Smith, Joris Verstappen, Sam Verstocken, and Sébastien Viaene. “HERschel Observations of Edge-on Spirals (HEROES). IV. Dust energy balance problem.” *A&A* 616 A120 (2018). DOI: [10.1051/0004-6361/201832899](https://doi.org/10.1051/0004-6361/201832899). arXiv: [1804.09071](https://arxiv.org/abs/1804.09071).

- [85] D. V. Bizyaev, S. J. Kautsch, N. Ya. Sotnikova, V. P. Reshetnikov, and **A. V. Mosenkov**. “Very thin disc galaxies in the SDSS catalogue of edge-on galaxies.” *MNRAS* 465(4) pp. 3784–3792 (2017). DOI: [10.1093/mnras/stw2972](https://doi.org/10.1093/mnras/stw2972). arXiv: [1612.01042](https://arxiv.org/abs/1612.01042).
- [86] V. Casasola, L. P. Cassarà, S. Bianchi, S. Verstocken, E. Xilouris, L. Magrini, M. W. L. Smith, I. De Looze, M. Galametz, S. C. Madden, M. Baes, C. Clark, J. Davies, P. De Vis, R. Evans, J. Fritz, F. Galliano, A. P. Jones, **A. V. Mosenkov**, S. Viaene, and N. Ysard. “Radial distribution of dust, stars, gas, and star-formation rate in DustPedia face-on galaxies.” *A&A* 605 A18 (2017). DOI: [10.1051/0004-6361/201731020](https://doi.org/10.1051/0004-6361/201731020). arXiv: [1706.05351](https://arxiv.org/abs/1706.05351).
- [87] J. I. Davies, M. Baes, S. Bianchi, A. Jones, S. Madden, M. Xilouris, M. Bocchio, V. Casasola, L. Cassara, C. Clark, I. De Looze, R. Evans, J. Fritz, M. Galametz, F. Galliano, S. Lianou, **A. V. Mosenkov**, M. Smith, S. Verstocken, S. Viaene, M. Vika, G. Wagle, and N. Ysard. “DustPedia: A Definitive Study of Cosmic Dust in the Local Universe.” *PASP* 129(974) p. 044102 (2017). DOI: [10.1088/1538-3873/129/974/044102](https://doi.org/10.1088/1538-3873/129/974/044102). arXiv: [1609.06138](https://arxiv.org/abs/1609.06138).
- [88] George A. Gontcharov, and **Aleksandr V. Mosenkov**. “On the discrepancy between astero-seismic and Gaia DR1 TGAS parallaxes.” *MNRAS* 470(1) pp. L97–L101 (2017). DOI: [10.1093/mnrasl/slx083](https://doi.org/10.1093/mnrasl/slx083). arXiv: [1705.09063](https://arxiv.org/abs/1705.09063).
- [89] George A. Gontcharov, and **Aleksandr V. Mosenkov**. “Verifying reddening and extinction for Gaia DR1 TGAS main sequence stars.” *MNRAS* 472(4) pp. 3805–3820 (2017). DOI: [10.1093/mnras/stx2219](https://doi.org/10.1093/mnras/stx2219). arXiv: [1709.01160](https://arxiv.org/abs/1709.01160).
- [90] S. S. Savchenko, N. Ya. Sotnikova, **A. V. Mosenkov**, V. P. Reshetnikov, and D. V. Bizyaev. “Measuring the X-shaped structures in edge-on galaxies.” *MNRAS* 471(3) pp. 3261–3272 (2017). DOI: [10.1093/mnras/stx1802](https://doi.org/10.1093/mnras/stx1802). arXiv: [1707.04700](https://arxiv.org/abs/1707.04700).
- [91] **Aleksandr V. Mosenkov**, Flor Allaert, Maarten Baes, Simone Bianchi, Peter Camps, Gert De Geyter, Ilse De Looze, Jacopo Fritz, Gianfranco Gentile, Thomas M. Hughes, Fraser Lewis, Joris Verstappen, Sam Verstocken, and Sébastien Viaene. “HERschel Observations of Edge-on Spirals (HEROES). III. Dust energy balance study of IC 2531.” *A&A* 592 A71 (2016). DOI: [10.1051/0004-6361/201628676](https://doi.org/10.1051/0004-6361/201628676). arXiv: [1605.06239](https://arxiv.org/abs/1605.06239).
- [92] Vladimir P. Reshetnikov, **Aleksandr V. Mosenkov**, Alexei V. Moiseev, Sergey S. Kotov, and Sergey S. Savchenko. “Galaxies with conspicuous optical warps.” *MNRAS* 461(4) pp. 4233–4245 (2016). DOI: [10.1093/mnras/stw1623](https://doi.org/10.1093/mnras/stw1623). arXiv: [1607.02274](https://arxiv.org/abs/1607.02274).
- [93] **A. V. Mosenkov**, N. Ya. Sotnikova, V. P. Reshetnikov, D. V. Bizyaev, and S. J. Kautsch. “Does the stellar disc flattening depend on the galaxy type?” *MNRAS* 451(3) pp. 2376–2389 (2015). DOI: [10.1093/mnras/stv1085](https://doi.org/10.1093/mnras/stv1085). arXiv: [1505.03383](https://arxiv.org/abs/1505.03383).
- [94] V. P. Reshetnikov, S. S. Savchenko, **A. V. Mosenkov**, N. Ya. Sotnikova, and D. V. Bizyaev. “Polar-bulge galaxies.” *Astronomy Letters* 41(12) pp. 748–756 (2015). DOI: [10.1134/S1063773715120117](https://doi.org/10.1134/S1063773715120117). arXiv: [1511.05416](https://arxiv.org/abs/1511.05416).
- [95] D. V. Bizyaev, S. J. Kautsch, **A. V. Mosenkov**, V. P. Reshetnikov, N. Ya. Sotnikova, N. V. Yablokova, and R. W. Hillyer. “The Catalog of Edge-on Disk Galaxies from SDSS. I. The Catalog and the Structural Parameters of Stellar Disks.” *ApJ* 787(1) p. 24 (2014). DOI: [10.1088/0004-637X/787/1/24](https://doi.org/10.1088/0004-637X/787/1/24). arXiv: [1404.3072](https://arxiv.org/abs/1404.3072).
- [96] V. V. Bobylev, **A. V. Mosenkov**, A. T. Bajkova, and G. A. Gontcharov. “Investigation of the Galactic bar based on photometry and stellar proper motions.” *Astronomy Letters* 40(2-3) pp. 86–94 (2014). DOI: [10.1134/S1063773714030037](https://doi.org/10.1134/S1063773714030037). arXiv: [1402.3153](https://arxiv.org/abs/1402.3153).
- [97] **A. V. Mosenkov**. “Mass decomposition of galaxies using DECA software package.” *Astrophysical Bulletin* 69(1) pp. 99–112 (2014). DOI: [10.1134/S199034131401009X](https://doi.org/10.1134/S199034131401009X).
- [98] **A. V. Mosenkov**, N. Ya. Sotnikova, and V. P. Reshetnikov. “Mirages in galaxy scaling relations.” *MNRAS* 441(2) pp. 1066–1085 (2014). DOI: [10.1093/mnras/stu602](https://doi.org/10.1093/mnras/stu602). arXiv: [1403.7555](https://arxiv.org/abs/1403.7555).
- [99] N. Ya. Sotnikova, V. P. Reshetnikov, and **A. V. Mosenkov**. “Bulges and discs of spiral galaxies: edge-on perspective.” *Astronomical and Astrophysical Transactions* 27(2) pp. 325–334 (2012).

- [100] **A. V. Mosenkov**, N. Ya. Sotnikova, and V. P. Reshetnikov. “2MASS photometry of edge-on spiral galaxies - I. Sample and general results.” MNRAS 401(1) pp. 559–576 (2010). DOI: [10.1111/j.1365-2966.2009.15671.x](https://doi.org/10.1111/j.1365-2966.2009.15671.x). arXiv: [0909.1263](https://arxiv.org/abs/0909.1263).

Presentations

Author indicators: **undergraduate student** whom I mentored (research advisor); **graduate student** whom I mentored (committee chair or committee member).

Invited Colloquia, Seminars, Conference Talks

1. “Revealing Polar-Structure Galaxies Across Cosmic Time with DESI and Euclid,” **J. Guerrete**; **S. Bahr**; **A. Mosenkov**, Oral, Press-conference at the AAS Meeting #247, Phoenix, AZ, USA, Jan 4-8, 2026.
2. “Polar-Structure Galaxies as Windows into Dark Matter Halos,” **A. Mosenkov**, Oral, Invited speaker at the Dark Matter Day 2025, Virtual, Oct 31, 2025.
3. “Exploring Galaxy Formation and Evolution through Cosmological Simulations,” **A. Mosenkov**, Oral, Brigham Young University Physics Department Theory Group Seminar, BYU, UT, USA, Sep 17, 2024.
4. “Using Artificial Intelligence in Astronomy,” **A. Mosenkov**, Oral, Faculty Research Networking Event, BYU, UT, USA, Aug 22, 2023.
5. “Unveiling the nature of galaxies from deep imaging,” **A. Mosenkov**, Oral, BYU Department of Physics and Astronomy Colloquium, BYU, UT, USA, Jan 27, 2023.
6. “Determination of the Galaxy’s Parameters from unWISE Infrared Sky Survey Data,” S. S. Savchenko; **A.V. Mosenkov**; A.A. Smirnov; P.Camps, Oral, Saint Petersburg University Astronomy Colloquium, Saint Petersburg, Russia, Oct 20, 2022.
7. “Connecting the Sky and the Earth,” **A. Mosenkov**, Oral, Faculty Research Networking Event, BYU, UT, USA, Aug 23, 2022.
8. “Exploring the Low Surface Brightness Universe,” **A. Mosenkov**, Oral, Brigham Young University Physics Department Colloquium, BYU Idaho, Nov 18, 2021.
9. “Exploring the Low Surface Brightness Universe,” **A. Mosenkov**, Oral, Brigham Young University Physics Department Theory Group Seminar, BYU, UT, USA, Sep 21, 2021.
10. “Connecting the Sky and the Earth,” **A. Mosenkov**, Oral, Faculty Research Networking Event, BYU, UT, USA, Aug 24, 2021.
11. “Exploring the Low Surface Brightness Universe,” **A. Mosenkov**, Oral, Saint Petersburg University Astronomy Colloquium, Saint Petersburg, Russia, Mar 18, 2021.
12. “Structural Properties of Edge-On Galaxies,” **A. Mosenkov**, Oral, Ioffe Institute Colloquium, Saint Petersburg, Russia, Mar 13, 2018.
13. “Extragalactic Astronomy (series of seminars),” **A. Mosenkov**, Oral, Pulkovo Astronomical Observatory, Saint Petersburg, Russia, Jan-Mar, 2018.
14. “Structural Properties of Edge-On Galaxies,” **A. Mosenkov**, Oral, Astronomical Institute Colloquium, Heidelberg, Germany, Apr 27, 2017.
15. “Structural Properties of Edge-On Galaxies,” **A. Mosenkov**, Oral, Astronomical Institute Colloquium, Potsdam, Germany, Apr 12, 2017.
16. “Structural Properties of Edge-On Galaxies,” **A. Mosenkov**, Oral, Special Astronomical Observatory Colloquium, Saint Petersburg, Russia, Oct 10, 2013.
17. “Structural Properties of Edge-On Galaxies,” **A. Mosenkov**, Oral, Pulkovo Astronomical

Observatory, Saint Petersburg, Russia, Oct 7, 2013.

18. “False Correlations of Scaling Parameters of Galaxy Bulges and Disks,” A. **Mosenkov**, Oral, Saint Petersburg University Astronomy Colloquium, Saint Petersburg, Russia, May 10, 2012.

Contributed Conference Presentations

1. “Tracing the Assembly Histories of Polar-Structure Galaxies through Low-Surface-Brightness Features,” **J. George**; A. **Mosenkov**, Poster, Rubin Community Workshop 2026, Menlo Park, CA, USA, Jul 27-31, 2026.
2. “Polar-Structure Galaxies Across Time: A New Frontier for Roman,” A. **Mosenkov**; **S. Bahr**; **J. Guerrette**, Poster, Shifting Landscapes in Astrophysics: New Frontiers to Explore with Roman, Pasadena, CA, USA, Jul 13-16, 2026.
3. “Photometric Decomposition of Polar-Structure Galaxies in the COUGS-DESI Catalog,” **R. Smith**; A. **Mosenkov**; **J. Seguíne**; **K. Yarbrough**; **S. Bahr**, Poster, AAS Meeting #248, Pasadena, CA, USA, Jun 14-18, 2026.
4. “Polar-Structure Galaxies in Euclid Q1: A First Look,” **J. Guerrette**; A. **Mosenkov**; **T. Spigarelli**; **B. Burton**; **K. Beckstead**; **I. Jensen**; **J. Seguíne**; **J. George**; **R. Smith**, Oral, AAS Meeting #247, Phoenix, AZ, USA, Jan 4-8, 2026.
5. “Low-Surface-Brightness Features in Polar-Structure Galaxies from the DESI Legacy Imaging Surveys,” **J. George**; A. **Mosenkov**, Poster, AAS Meeting #247, Phoenix, AZ, USA, Jan 4-8, 2026.
6. “Environment and Formation of Polar-Structure Galaxies with DESI,” **T. Spigarelli**; A. **Mosenkov**, Poster, AAS Meeting #247, Phoenix, AZ, USA, Jan 4-8, 2026.
7. “Bent Disks and Rings in Polar-Ring Galaxies,” **B. Burton**; A. **Mosenkov**, Poster, AAS Meeting #247, Phoenix, AZ, USA, Jan 4-8, 2026.
8. “A Statistical View of Polar-Structure Galaxies: Connecting Observations with Simulations,” A. **Mosenkov**; **S. Bahr**; **J. Guerrette**; **I. Jensen**; **J. George**; **T. Spigarelli**; **R. Smith**; **J. Seguíne**; **B. Burton**; **K. Beckstead**, Oral, AAS Meeting #247, Phoenix, AZ, USA, Jan 4-8, 2026.
9. “Probing the Periphery of Edge-On Galaxies with Deep Imaging,” A. **Mosenkov**, Oral, Rubin Community Workshop 2025, Tucson, AZ, USA, Jul 28 - Aug 1, 2025.
10. “An Expanded Catalog and Atlas of Galaxies with Polar Structures: Preparing for the LSST Era,” **S. Bahr**; A. **Mosenkov**, Oral, Rubin Community Workshop 2025, Tucson, AZ, USA, Jul 28 - Aug 1, 2025.
11. “The Outer Structure of Galaxies in Modern Deep Sky Surveys,” A. **Mosenkov**, Oral, VAK-2024, Nizhnij Arkhyz, Russia, Aug 25-31, 2024.
12. “Galactic Cirrus in Deep Optical Observations,” A. **Mosenkov**, Oral, Rubin Community Workshop 2024, Menlo Park, CA, USA, Jul 22-26, 2024.
13. “The Influence of Environment on the Morphology of Spiral Structures in Galaxies: Insights from Deep Optical Imaging,” A. **Mosenkov**, Oral, AAS Meeting #244, Madison, WI, USA, Jun 9–13, 2024.
14. “An Updated Occurrence Rate for Galaxies with Polar Structures,” **S. Bahr**; A. **Mosenkov**, Oral, AAS Meeting #244, Madison, WI, USA, Jun 9–13, 2024.
15. “Faint Features Around Edge-On Galaxies in Deep Optical Surveys,” **K. Adams**; A. **Mosenkov**, Oral, AAS Meeting #243, New Orleans, LA, USA, Jan 7–11, 2024.
16. “Deep Optical Observations of UGC 10043 and UGC 9560/9562,” **S. Heilesen**; A. **Mosenkov**, Poster, AAS Meeting #243, New Orleans, LA, USA, Jan 7–11, 2024.

17. “Deep Observations of Galaxies at Apache Point Observatory,” **R. Chambers**; A. **Mosenkov**, Poster, AAS Meeting #243, New Orleans, LA, USA, Jan 7–11, 2024.
18. “Comparison of Stellar Disk Profiles from TNG50 to Observed Galaxies,” **R. Kelly**; A. **Mosenkov**; M. Baes; **W. Roque**, Poster, AAS Meeting #243, New Orleans, LA, USA, Jan 7–11, 2024.
19. “Deep Imaging of Galaxies and Galactic Cirrus,” A. **Mosenkov**; A. Smirnov; D. Poliakov; A. Marchuk; S. Savchenko, Oral, Rubin Galaxies Collaboration Meeting, Paris, France, Jun 7–9, 2023.
20. “Dust Emission versus Dust Attenuation in Edge-On Galaxies,” A. **Mosenkov**; P. Usachev; **N. Hebdon**, Oral, AAS Meeting #242, Albuquerque, NM, USA, Jun 4–8, 2023.
21. “Thin and Thick Dust Disks in Edge-On Galaxies,” P. Usachev; A. **Mosenkov**, Oral, Physics of the ISM Conference, Moscow, Russia, May 25–26, 2023.
22. “Our New Maps and Models of the Spatial Variations of Dust Extinction in the Galaxy,” G. Gontcharov; A. **Mosenkov**, Oral, Physics of the ISM Conference, Moscow, Russia, May 25–26, 2023.
23. “Multi-wavelength Decomposition of Galaxies with Spiral Structure: M51,” A. Marchuk; I. Chugunov; A. **Mosenkov**, Oral, MSA-2023, Volgograd, Russia, May 15–19, 2023.
24. “Tidal Features Around Edge-On Galaxies in the SDSS Stripe 82,” **K. Adams**; M. Skryabina; A. **Mosenkov**, Poster, AAS Meeting #241, Seattle, WA, USA, Jan 8–12, 2023.
25. “How the Milky Way’s Structure Measures Up to the Local Universe,” **J. Guerrette**; A. **Mosenkov**; **Z. Shakespear**, Poster, AAS Meeting #241, Seattle, WA, USA, Jan 8–12, 2023.
26. “Edge-On Galaxies in Deep Optical Surveys,” A. **Mosenkov**, Oral, AAS Meeting #241, Seattle, WA, USA, Jan 8–12, 2023.
27. “Edge-On Galaxies in the DESI Legacy Imaging Surveys,” A. V. **Mosenkov**, Oral, DECam at 10 Years, Tucson, AZ, USA, Sep 12–14, 2022.
28. “The Dust Distribution in Edge-On Galaxies Based on Herschel Observations,” A. **Mosenkov**; P. Usachev, Oral, AAS Meeting #240, Pasadena, CA, USA, Jun 12–16, 2022.
29. “Galaxies with Polar Structures in the SDSS Stripe 82,” **Z. Shakespear**; A. **Mosenkov**, Poster, AAS Meeting #240, Pasadena, CA, USA, Jun 12–16, 2022.
30. “The Properties of Galactic Globular Clusters from Gaia EDR3 and Other Data Compared with Theoretical Isochrones,” G. Gontcharov; A. **Mosenkov**; M. Khovritchev; V. Il’in; A. Marchuk; S. Savchenko; A. Smirnov; P. Usachev, Oral, VAK-2021: Astronomy at the Epoch of Multimessenger Studies, Moscow, Russia, Aug 23–28, 2021.
31. “Studying the Characteristics of Spiral Galaxies,” P. Smirnova; A. **Mosenkov**; A. Marchuk, Poster, VAK-2021: Astronomy at the Epoch of Multimessenger Studies, Moscow, Russia, Aug 23–28, 2021.
32. “Investigation of Galactic Cirri Based on SDSS Stripe 82 Images,” S. Savchenko; D. Polyakov; A. **Mosenkov**; A. Marchuk; V. Il’in; G. Gontcharov; A. Smirnov; P. Usachev, Oral, VAK-2021: Astronomy at the Epoch of Multimessenger Studies, Moscow, Russia, Aug 23–28, 2021.
33. “Interstellar Extinction at High Galactic Latitudes Across the Whole Dust Layer in the Galaxy,” G. Gontcharov; A. **Mosenkov**; V. Il’in; A. Marchuk; S. Savchenko; A. Smirnov; P. Usachev, Oral, VAK-2021: Astronomy at the Epoch of Multimessenger Studies, Moscow, Russia, Aug 23–28, 2021.
34. “Dust Discs in Edge-On Galaxies: Case of NGC 4437,” P. Usachev; A. **Mosenkov**; S. Savchenko; G. Gontcharov; V. Il’in; A. Marchuk; A. Smirnov, Oral, VAK-2021: Astronomy at the Epoch of Multimessenger Studies, Moscow, Russia, Aug 23–28, 2021.

35. “Catalog of Edge-On Galaxies Using the Pan-STARRS1 Survey Data,” D. Makarov; S. Savchenko; A. **Mosenkov**; D. Bizyaev; V. Reshetnikov; A. Antipova; I. Tikhonenko; P. Usachev; S. Borisov; L. Makarova; S. Kautsch; A. Marchuk; E. Rubtsov; M. Edukov; M. Skryabina; P. Smirnova, Oral, VAK-2021: Astronomy at the Epoch of Multimessenger Studies, Moscow, Russia, Aug 23–28, 2021.
36. “Bulge–Disk Decomposition of Ultrathin Galaxies,” A. V. Antipova; A. V. **Mosenkov**; D. I. Makarov; V. P. Reshetnikov, Oral, VAK-2021: Astronomy at the Epoch of Multimessenger Studies, Moscow, Russia, Aug 23–28, 2021.
37. “An Analysis of Methods for Determining Corotation Radii in Galaxies,” A. A. Marchuk; A. V. **Mosenkov**; S. S. Savchenko, Oral, VAK-2021: Astronomy at the Epoch of Multimessenger Studies, Moscow, Russia, Aug 23–28, 2021.
38. “Spectroscopic Study of Superthin Galaxies and Their Dark Matter Halos,” S. Kautsch; D. Bizyaev; D. I. Makarov; V. P. Reshetnikov; A. V. **Mosenkov**; A. V. Antipova, Oral, AAS Meeting #237, Virtual, Jan 11–15, 2021.
39. “Dust and Stellar Emission in Edge-On Galaxies,” A. V. **Mosenkov**, Poster, The Rise of Metals and Dust in Galaxies Through Cosmic Time, Virtual, Jul 13–17, 2020.
40. “Investigation of the Parameters of Spiral Structure Based on Multi-band Photometry,” A. V. **Mosenkov**; S. S. Savchenko; A. A. Marchuk, Oral, Modern Stellar Astronomy, Nizhnij Arkhyz, Russia, Oct 7–11, 2019.
41. “Deep Imaging of Low Surface Brightness Structures Near Galaxies,” A. V. **Mosenkov**; M. Rich, Oral, Diversity of the Local Universe, Nizhnij Arkhyz, Russia, Sep 30–Oct 4, 2019.
42. “Low-Surface-Brightness Features in Hickson Compact Groups,” N. Brosch; M. Rich; A. V. **Mosenkov**, Oral, IAU Symposium 355, Tenerife, Spain, Jul 8–12, 2019.
43. “Photometry of the Superthin Edge-On Galaxy FGC2441,” D. Makarov; A. V. **Mosenkov**, Poster, EWASS 2019, Lyon, France, Jun 24–28, 2019.
44. “Interstellar Polarization in the Local Bubble and Gould Belt from Gaia DR2,” G. A. Gontcharov; A. V. **Mosenkov**, Oral, Modern Stellar Astronomy, Moscow, Russia, Oct 22–26, 2018.
45. “The Interstellar Extinction of the Gaia Stars,” A. V. **Mosenkov**; G. A. Gontcharov, Poster, EWASS 2018, Liverpool, UK, Apr 3–6, 2018.
46. “Faint Extended Structures Near Edge-On Galaxies,” A. V. **Mosenkov**, Poster, EWASS 2018, Liverpool, UK, Apr 3–6, 2018.
47. “DECA: A New Python Package for Galaxy Image Decomposition,” A. V. **Mosenkov**, Poster, EWASS 2018, Liverpool, UK, Apr 3–6, 2018.
48. “Modeling the HEROES Galaxies,” A. V. **Mosenkov**, Oral, SKIRT Days 2016, Ghent, Belgium, Nov 9, 2016.
49. “3D Reddening and Extinction Maps at the Beginning of the Gaia Era,” G. A. Gontcharov; A. V. **Mosenkov**, Oral, Stars: From Collapse to Collapse, Nizhny Arkhyz, Russia, Oct 3–7, 2016.
50. “Photometric Decomposition of the DustPedia Sample,” A. V. **Mosenkov**; M. Baes, Oral, DustPedia Meeting, Florence, Italy, Sep 15, 2016.
51. “Faint Extended Structures Near Galaxies: Preliminary Results from the Wise Observatory,” N. Brosch; A. **Mosenkov**; R. M. Rich, Oral, IAU Symposium, Toledo, Spain, Mar 14–18, 2016.
52. “Spectral Observations of Superthin Galaxies,” D. Bizyaev; S. J. Kautsch; N. Ya. Sotnikova; A. **Mosenkov**; V. P. Reshetnikov, Poster, AAS Meeting #227, Kissimmee, FL, USA, Jan 4–8, 2016.
53. “Structural Properties of Edge-On Galaxies,” A. V. **Mosenkov**, Poster, Deconstructing

- Galaxies Conference, Santiago, Chile, Nov 18–22, 2013.
54. “Structural Properties of Edge-On Spiral Galaxies,” A. V. **Mosenkov**, Oral, VAK-2023, Saint Petersburg, Russia, Sep 23-27, 2013.
 55. “Structural Properties of Edge-On Spiral Galaxies,” A.V. **Mosenkov**, Oral, Modern Stellar Astronomy, Pulkovo, Russia, Jun 10-12, 2013.
 56. “Mass Decomposition of Galaxy Images Using the DECA package,” A.V. **Mosenkov**, Oral, Current Problems in Extragalactic Astronomy XXX, Puschino, Russia, Apr 8-10, 2013.
 57. “Bar in Our Galaxy: Structure, Kinematics and Photometry,” A. V. **Mosenkov**; V. V. Bobylev, Oral, Pulkovo-2012 Conference, Saint Petersburg, Russia, Oct 1-5, 2012.
 58. “The Catalog of Edge-on Disk Galaxies Found in SDSS,” S. J. Kautsch; D. Bizyaev; A. V. **Mosenkov**; N. Y. Sotnikova; V. P. Reshetnikov; R. W. Hillyer; N. V. Yablokova, Poster, AAS Meeting #220, Anchorage, AK, USA, Jun 10-14, 2012.
 59. “Mirages in Galaxy Scaling Relations,” A. V. **Mosenkov**; N. Ya. Sotnikova; V. P. Reshetnikov, Oral, Galaxies: Origin, Dynamics, Structure and Astrophysical Disks, Sochi, Russia, May 14-15, 2012.
 60. “A New Catalog of Edge-On Galaxies in SDSS,” A.V. **Mosenkov**; D.V. Bizyaev; S. Kautsch; N.Ya. Sotnikova; R. Hiller, N.V. Yablokova, Oral, Current Problems in Extragalactic Astronomy XXIX, Puschino, Russia, Apr 17-19, 2012.
 61. “Photometry of Edge-On Spiral Galaxies: Structural Parameters and Scaling Relations of Bulges,” A. V. **Mosenkov**; N. Ya. Sotnikova; V. P. Reshetnikov, Oral, Fifty Years of Cosmic Era Conference, Yerevan, Armenia, Nov 21-25, 2011.
 62. “Bulges and discs of spiral galaxies: edge-on perspective,” N. Ya. Sotnikova; V. P. Reshetnikov; A. V. **Mosenkov**, Oral, Dynamic and Evolution of Disc Galaxies, Puschino, Russia, May 31 - June 4, 2010.

Student Research Conferences

1. “Student Classification of Polar Structure Galaxies in Euclid Quick Data Release 1,” **K. Beckstead**; A. **Mosenkov**, Oral, Brigham Young University Student Research Conference, Provo, UT, Feb 28, 2026.
2. “Structural Properties of Polar Structure Galaxies from Ellipse Fitting in the COUGS-DESI Catalog,” **I. Jensen**; A. **Mosenkov**, Oral, Brigham Young University Student Research Conference, Provo, UT, Feb 28, 2026.
3. “Searching for Polar-Structure Galaxies in Early Euclid Data,” **J. Guerrette**; A. **Mosenkov**, Oral, Brigham Young University Student Research Conference, Provo, UT, Feb 28, 2026.
4. “Polar-Structure Galaxies: Environmental Dependence and Formation Mechanisms,” **T. Spigarelli**; A. **Mosenkov**, Oral, Brigham Young University Student Research Conference, Provo, UT, Feb 28, 2026.
5. “Polar Structure Galaxy Parameterization and Decomposition,” **J. Seguire**; A. **Mosenkov**, Oral, Brigham Young University Student Research Conference, Provo, UT, Feb 28, 2026.
6. “COUGS-DESI: The Largest Catalog of Polar-Structure Galaxies,” **S. Bahr**; A. **Mosenkov**, Oral, Brigham Young University Student Research Conference, Provo, UT, Feb 28, 2026.
7. “Bent Rings in Polar-Ring Galaxies,” **B. Burton**; A. **Mosenkov**, Oral, Brigham Young University Student Research Conference, Provo, UT, Feb 28, 2026.
8. “Tracing Cosmic Evolution Through Edge-On Galaxies: The Largest Edge-On Galaxy Atlas and its Insights into Galaxy Interactions,” **K. Adams**; A. **Mosenkov**, Oral, Brigham Young University Student Research Conference, Provo, UT, Mar 8, 2025.

9. “Polar-structure Galaxies in the IllustrisTNG50 Simulation,” **S. Bahr**; A. Mosenkov, Oral, Brigham Young University Student Research Conference, Provo, UT, Mar 8, 2025.
10. “Measuring Galactic Disk Warps in EGIS Galaxies Using DESI,” **B. Burton**; A. Mosenkov, Oral, Brigham Young University Student Research Conference, Provo, UT, Mar 8, 2025.
11. “Illuminating Galactic Dust: Creating Radiative Transfer Models for Edge-On Galaxies in the EGIPS Catalog,” **J. Guerrette**; A. Mosenkov, Oral, Brigham Young University Student Research Conference, Provo, UT, Mar 8, 2025.
12. “Extending Detection Limits of Low Surface Brightness Structures in Edge-On Galaxies,” **L. Stacey**; A. Mosenkov, Oral, Brigham Young University Student Research Conference, Provo, UT, Mar 8, 2025.
13. “Exploring the Statistics of Polar Structure Formation in Galaxies: Insights from DESI DR10,” **T. Spigarelli**; A. Mosenkov, Oral, Brigham Young University Student Research Conference, Provo, UT, Mar 8, 2025.
14. “Classifying Polar Structure Galaxy Candidates Using Convolutional Neural Networks,” **N. Pineda**; A. Mosenkov, Oral, Brigham Young University Student Research Conference, Provo, UT, Mar 8, 2025.
15. “Analyzing the Vertical Structure of Galaxies in the TNG50-SKIRT Atlas,” **P. Bowden**; A. Mosenkov, Oral, Brigham Young University Student Research Conference, Provo, UT, Mar 8, 2025.
16. “Stellar Disk Profiles from the TNG50-SKIRT Atlas,” **R. Kelly**; A. Mosenkov, Oral, Brigham Young University Student Research Conference, Provo, UT, Feb 24, 2024.
17. “How Does Our Galaxy Compare to the Rest of the Universe?,” **J. Guerrette**; A. Mosenkov, Oral, Brigham Young University Student Research Conference, Provo, UT, Feb 24, 2024.
18. “Faint Features Around Edge-On Galaxies In Deep Optical Surveys,” **K. Adams**; A. Mosenkov, Oral, Brigham Young University Student Research Conference, Provo, UT, Feb 24, 2024.
19. “Deep optical observations of polar-structure galaxies,” **S. Bahr**; A. Mosenkov, Oral, Brigham Young University Student Research Conference, Provo, UT, Feb 24, 2024.
20. “Tidal features around edge-on galaxies in the SDSS Stripe 82,” **K. Adams**; A. Mosenkov, Oral, Brigham Young University Student Research Conference, Provo, UT, Mar 4, 2023.
21. “The effects of dust and inclination on galaxy profiles,” **R. Kelly**; A. Mosenkov, Oral, Brigham Young University Student Research Conference, Provo, UT, Mar 4, 2023.
22. “The Occurrence Rate of Polar Ring Galaxies in the SDSS Stripe 82,” **Z. Shakespear**; A. Mosenkov, Oral, Brigham Young University Student Research Conference, Provo, UT, Mar 4, 2023.
23. “Galactic cirrus: comparisons between the optical and infrared counterparts,” **J. Seguire**; A. Mosenkov, Oral, Brigham Young University Student Research Conference, Provo, UT, Mar 4, 2023.
24. “Comparing the Milky Way’s Structural Parameters to Other Similar Galaxies,” **J. Guerrette**; A. Mosenkov, Oral, Brigham Young University Student Research Conference, Provo, UT, Mar 5, 2022.

University Activities

Teaching: Courses Taught at BYU

- Physics 127, Descriptive Astronomy: Fall 2021, Fall 2022, Fall 2023, Winter 2024, Fall 2024, Winter 2026
- Physics 228, Stellar and Extragalactic Astronomy: Winter 2024, Winter 2025, Winter 2026
- Physics 430, Computational Physics Lab 3: Winter 2025
- Physics 529, Advanced Observational Astronomy: Winter 2022, Winter 2023
- Physics 727, Extragalactic Astrophysics and Cosmology 1: Winter 2023, Winter 2026

Significant Teaching Accomplishments

- BYU Physics 228: redesigned class, developed all new curriculum for Stellar and Extragalactic Astronomy, Winter 2024.
- BYU Physics 727: redesigned class, developed all new curriculum for Extragalactic Astrophysics and Cosmology 1, Winter 2023.

Teaching Awards/Recognition

- Outstanding Performance Award from BYU Department of Physics and Astronomy, for providing a unique learning environment in Stellar and Extragalactic Astronomy, Feb 2025.

Mentoring

Undergraduate students at BYU, faculty advisor

1. Lathan Skeehan — July 2026 – Present
2. Lincoln Young — April 2026 – Present
3. Allie Jarrett — April 2026 – Present
4. Kevan Beckstead — April 2026 – Present
5. Kaylee Yarbrough — September 2025 – Present
6. Brandon Burton — December 2024 – Present
7. Penelope Bowden — January 2024 – Present
8. Lydia Stacey — December 2023 – Present
9. Isaac Jensen — September 2023 – Present
10. Thea Spigarelli — January 2023 – Present
11. William Roque — September 2022 – Present
12. Jonah Seguire — December 2021 – Present
13. Nefi Pineda — January 2024 – April 2025
Senior thesis (2025): Classifying Polar Structure Galaxy Candidates Using Convolutional Neural Networks
14. Raymond Kelly — November 2022 – October 2024
15. Kade Vickers — September 2023 – June 2024
16. Jacob Guerrette — August 2021 – April 2024
Senior thesis (2024): The Milky Way's Structure: How it Compares to Other Galaxies and What That Implies About its Evolutionary History
17. Gibson Campbell — September 2023 – December 2023

- Senior thesis (2023): The Periods of a Near-Earth Orbit Asteroid
18. Noah Hebdon — August 2022 – May 2023
 19. Brent Bowler — February 2022 – January 2023
 20. Zac Shakespear — October 2021 – December 2022
 21. Denzil Watts — November 2021 – September 2022
 22. Mckenna Myckowiak — January 2021 – October 2021

Graduate students at BYU (Advisor/Committee chair)

1. Jacob Guerrette — September 2024 – Present
Ph.D. study: The Structure and Evolution of Polar-Structure Galaxies in the Modern Survey Era
2. Seneca Bahr — September 2023 – Present
Ph.D. study: Unraveling the Nature of Galaxies with Polar Structures Through Deep Imaging and Cosmological Simulations
3. Kyle Adams — September 2022 – August 2025
Master thesis: Low Surface Brightness Features of Edge-on Galaxies in Deep Sky Surveys

Graduate students at BYU (Committee member)

1. Nonnie Bash — September 2023 – Present
M.S.: Constraining the Dust Extinction of Circumnuclear Disks within Early-type Galaxies
2. Dallin Spencer — September 2022 – Present
Ph.D.: Dynamical Analysis of Surveyed Small Bodies in the Outer Solar System
3. Savannah Turner — September 2021 – Present
Ph.D.: A Large-Scale Survey of Brown Dwarf Atmospheres
4. Jared Davidson — September 2021 – Present
Ph.D.: Pioneering and Calibrating Near-IR Reverberation Mapping
5. Crystal-Lynn Bartier — September 2022 – April 2026
M.S.: Probing the Disequilibrium Chemistry of Two Late T-Dwarfs Using PICASSO

REU Students and RET

1. Jay Kneiss — May 2026 – Present
REU project (2026): Identification and Photometric Decomposition of Polar Structure Galaxies in Euclid
2. Daniela Pipper — May 2026 – Present
REU project (2026): Photometric Decomposition of Polar-structure Galaxies from the COUGS-DESI Catalog
3. Jonah George — June 2025 – Present
REU project (2025): Low Surface Brightness Features in Polar-Structure Galaxies
4. Ryan Smith — June 2025 – Present
REU project (2025): Photometric Decomposition of Polar-structure Galaxies
5. Robert Chambers — June 2023 – December 2023
REU project (2023): Deep Observations of Galaxies at Apache Point Observatory

Citizenship

Departmental Service at BYU

- Department Thesis Coordinator, Jun 2026–present.
- BYU Astronomical Society Faculty Adviser, Sept 2024–present.
- Astronomy Facilities Committee Member, Sept 2024–present.
- Chair, PHSCS127 Curricular Subcommittee, Winter 2022–present.
- Member, Computational Lab Committee, Dept. of Physics and Astronomy, Sept 2021–present. Contributed to enriching the curriculum for Physics and Astronomy majors by integrating astronomy-focused assignments (including extra-credit work) into PHSCS230 computational labs; revised course materials to correct errors, update Mathematica syntax, fix broken links, and clarify assignments.
- Referee, 3-minute graduate student competition (2026); referee, BYU Student Research Conference (2022, 2023, 2024, 2026).
- Revised PHSCS430 Computational Lab to correct typos and clarify assignments. Wrote an update to Lab #13 (“Machine Learning with Neural Networks”) to include an astronomical application: “Identifying galaxies, stars, and quasars with machine learning, 2021 & 2026”
- Peer teaching evaluator for Richard Sandberg (2024) and Denise Stephens (2025).
- Developer of new observational projects using eVscopes and for solar eclipse observations (October 2023 and April 2024).
- Undergraduate Committee Member, Sept 2022–Sept 2024. Regularly mentored undergraduate students.
- Assisted in preparing graduate qualifying examinations, Summer 2024.
- Assisted with the departmental Major’s Fair, October 2021 & 2022).

Professional Activities

Professional Associations

- American Astronomical Society (AAS) member (2021–current)
- International Astronomical Union (IAU) member (2018–current)

Professional Citizenship

- Guest Editor for the research topic in *Frontiers in Astronomy and Space Sciences*: “Revealing the Hidden Universe: Low-Surface-Brightness Astronomy in the Big-Survey Era”, Spring 2026–present.
- Guest Editor for the special issue “Unveiling the Structural Properties of Galaxies Using Contemporary Wide-Field Surveys” in *Galaxies* (MDPI), Winter 2026–present.
- Reviewer for various astronomical journals (typically 3–5 reviews per year), including *The Astrophysical Journal*, *Astronomy & Astrophysics*, *Monthly Notices of the Royal Astronomical Society*, *Publications of the Astronomical Society of Australia*, *Galaxies*, *Frontiers in Astronomy and Space Sciences*, *RAS Techniques and Instruments*, *Imaging Science Journal*, and *Astrophysical Bulletin*.

- Developer and maintainer of the publicly available Python package *IMAN* for galaxy surface photometry, providing tools for the astronomical community and regularly updating it with new routines and improvements (available at https://bitbucket.org/mosenkov/iman_new).
- Judge for the AAS Chambliss Competition at the 247th AAS Meeting, January 2026.
- Guest Editor for the special issue “From Tides to Waves: Understanding the Formation Mechanisms of Galactic Spirals” in *Galaxies* (MDPI), Summer 2024–Fall 2025.
- Grant Proposal Reviewer for NASA, Spring 2025.
- Member, ARC 3.5-m Consortium, Apache Point Observatory, Summer 2022–present.
- Editorial Review Board Member, *Frontiers in Astronomy and Space Sciences*, Summer 2022–present.
- Grant Proposal Reviewer for NASA, Winter 2022–Winter 2023.

Early Career Professional Development

- Participated in the “Write Winning NSF Grant Proposals” event presented by Grant Writers’ Seminars & Workshops, May 2026.
- Participated in multiple Pre-CFS Faith and Learning Sessions in 2022-2026.
- Participated in the Summer Grant-Writing Bootcamp, August 12-15, 2025.
- Participated in the Summer School in Statistics for Astronomers, 2025.
- Participated in the Faculty Learning Community program, Winter 2025.
- Participated in the Grant-Writing Bootcamp with Dr. Jon Balzotti, May 9-11, 2022.
- Participated in the BYU New Faculty workshop, May 2022.
- Participated in the BYU Workshop and Writing Retreat “Applying the Ten Steps of Publish & Flourish” by Tara Gray, December 5-9 2021.
- Participated in the AAPT New Faculty Workshop, College Park, MD, Nov 11-14, 2021.
- Participated in the BYU New Faculty seminar series, Fall 2021.
- Participated in the AAPT New Faculty Workshop (virtual), June 21-24 2021.
- Participated in the virtual training program for the 3.5-m telescope at Apache Point Observatory, Nov 2020